

VASCULAR FLORA OF TWO WEST LOUISIANA PITCHER PLANT BOGS

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ABSTRACT

The floristic composition and soil characteristics of two west Louisiana pitcher plant bogs are described.

KEY WORDS: Pitcher plant bogs, Louisiana, floristics, *Sarracenia*.

INTRODUCTION

In a previous paper we described the floristic composition of two west Louisiana pitcher plant bogs (MacRoberts & MacRoberts 1988). In the present paper we describe the floristic composition of another two west Louisiana pitcher plant bogs. The reason for undertaking these studies is given in our previous paper: almost nothing has been published about bogs west of the Mississippi delta although a start was made over three decades ago by Rowell (1949) and Kral (1955).

STUDY SITES

Fixit and Woodcock bogs are located in the Kisatchie District of the Kisatchie National Forest, Natchitoches Parish, about 7 km ENE of Lotus at the headwaters of the Bayou L'Ivrogne drainage system, at about 90 m above sea level. They are approximately 0.5 km apart. Fixit measures approximately 0.4 ha and Woodcock about 0.8 ha.

The two bogs are relatively flat with a slight slope and are open with a few scattered pines and shrubs. They are surrounded by elements of upland Longleaf Pine forest at their upper slopes and abut riparian woodland at their lower edges. They occur on fine, slow draining sandy loam that is kept damp through the year by seeps at their upper margins. *Sphagnum* is present in both bogs but is not abundant. The climate is described in our previous paper. Both sites have been variously damaged by logging.

Table 1. Soil Characteristics.

Exchangeable ions (ppm)							
Site/Sample	pH	P	K	Ca	Mg	OM%	
Fixit	1	5.0	5	31	100	24	0.7
	2	4.7	3	28	80	16	0.5
Woodcock	1	4.7	2	32	100	49	0.5
	2	4.9	2	37	80	24	1.1

METHODS

We visited the bogs at two week intervals from April through October 1989. Voucher specimens for each of 55 reported species were collected. Rare or easily identifiable plants were not collected. We follow MacRoberts (1984; 1989) for scientific nomenclature. Two soil samples from the upper 15 cm of each bog were analyzed by A & L Agricultural Laboratories, Memphis, Tennessee.

RESULTS

Table 1 gives soil information for both bogs.

Table 2 lists the species found at the two bogs. Double asterisk indicates presence at Woodcock bog only, single asterisk indicates occurrence at Fixit bog only, and absence of a symbol indicates presence at both bogs.

Table 2. List of Taxa Present at Fixit and Woodcock Bogs

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- DENNSTAEDTICEAE - *Pteridium aquilinum* (L.) Kuhn.
LYCOPODIACEAE - *Lycopodium alopecuroides* L., *L. appressum* (Chapm.) Lloyd & Underw., *L. carolinianum* L.
OSMUNDACEAE - *Osmunda cinnamomea* L., *O. regalis* L.
PINACEAE - *Pinus palustris* P. Mill., *P. taeda* L.
AMARYLLIDACEAE - *Hypoxis rigida* Chapm.
BURMANNIACEAE - *Burmannia capitata* (Walt.) Mart.
CYPERACEAE - *Carex glaucescens* Ell., *Eleocharis microcarpa* Torr.*,
Eleocharis tuberculosa (Michx.) Roem. & Schult., *Fuirena squarrosa* Michx.,
Rhynchospora globularis (Chapm.) Small var. *globularis*, *R. glomerata* (L.) Vahl*, *R. gracilentia* A. Gray, *R. oligantha* A. Gray, *R. plumosa* Ell., *Scleria reticularis* Michx., *S. triglomerata* Michx.**
ERIOCAULACEAE - *Eriocaulon decangulare* L., *Lachnocaulon anceps* (Walt.) Morong.
JUNCACEAE - *Juncus scirpoides* Lam., *J. trigonocarpus* Steud.
LILIACEAE - *Aletris aurea* Walt., *Smilax laurifolia* L.

Table 2 (continued)

- ORCHIDACEAE - *Calopogon tuberosus* (L.) B.S.P., *Platanthera ciliaris* (L.) Lindl., *Platanthera integra* (Nutt.) Gray ex Beck*, *Pogonia ophioglossoides* (L.) Juss., *Spiranthes cernua* (L.) L.C. Rich.
- POACEAE - *Andropogon ternarius* Michx., *Anthaenantia rufa* (Ell.) Schultes, *Dichantheium acuminatum* (Sw.) Gould & Clark, *D. scabriusculum* (Ell.) Gould & Clark*, *D. scoparium* (Lam.) Gould*. *Muhlenbergia expansa* (Poir.) Trin.**. *Panicum rigidulum* Bosc ex Nees, *Panicum verrucosum* Muhl.*, *Panicum virgatum* L., *Paspalum laeve* Michx.*, *Schizachyrium scoparium* (Michx.) Nash.
- XYRIDACEAE - *Xyris ambigua* Beyr. ex Kunth, *X. baldwiniana* Schultes, *X. caroliniana* Walt.*, *X. difformis* Chapm., *X. drummondii* Malme, *X. torta* Smith.*
- ACERACEAE - *Acer rubrum* L.
- ANACARDIACEAE - *Rhus copallina* L., *Toxicodendron vernix* (L.) Kuntze.
- APIACEAE - *Eryngium integrifolium* Walt., *Ozypolis rigidior* (L.) Raf., *Ptilimnium capillaceum* (Michx.) Raf.
- AQUIFOLIACEAE - *Ilex opaca* Ait.*, *I. vomitoria* Ait.
- ASTERACEAE - *Aster ericoides* L., *Chaptalia tomentosa* Vent., *Coreopsis linifolia* Nutt., *Eupatorium fistulosum* Barratt** *E. leucolepis* (DC.) T. & G., *E. rotundifolium* L., *Helianthus angustifolius* L., *Liatris pycnostachya* Michx., *Marshallia tenuifolia* Raf.
- BETULACEAE - *Alnus serrulata* (Ait.) Willd.
- CAMPANULACEAE - *Lobelia puberula* Michx.**, *L. reverchonii* B.L. Turner.
- CAPRIFOLIACEAE - *Viburnum nudum* L.
- CLUSIACEAE - *Hypericum fasciculatum* Lam., *H. setosum* L., *H. stans* (Michx.) Adams & Robson.
- DROSERACEAE - *Drosera brevifolia* Pursh, *D. capillaris* Poir.
- ERICACEAE - *Rhododendron canescens* (Michx.) Sw.***, *Vaccinium corymbosum* L.
- FABACEAE - *Tephrosia onobrychoides* Nutt.
- GENTIANACEAE - *Bartonia paniculata* (Michx.) Muhl., *Sabatia gentianoides* Ell.
- HAMAMELIDACEAE - *Liquidambar styraciflua* L.
- LAURACEAE - *Persea borbonia* (L.) Spreng.
- LENTIBULARIACEAE - *Pinguicula pumila* Michx., *Utricularia cornuta* Michx., *U. juncea* Vahl, *U. subalata* L.
- LINACEAE - *Linum medium* (Planch.) Britt.
- LOGANIACEAE - *Cynoctonum sessilifolium* (Walt.) St. Hil., *Gelsemium sempervirens* (L.) St. Hil.

Table 2 (continued)

MAGNOLIACEAE - *Magnolia virginiana* L.

MELASTOMATACEAE - *Rhexia mariana* L. var. *mariana*, *R. petiolata* Walt.

MYRICACEAE - *Myrica cerifera* L., *M. heterophylla* Raf.

ONAGRACEAE - *Ludwigia alternifolia* L., *L. hirtella* Raf.

POLYGALACEAE - *Polygala cruciata* L., *P. incarnata* L.** , *P. mariana* P. Mill., *P. nana* (Michx.) DC., *P. ramosa* Ell.

ROSACEAE - *Aronia arbutifolia* (L.) Pers., *Rubus louisianus* Berger.

RUBIACEAE - *Diodia virginiana* L.

SARRACENIACEAE - *Sarracenia alata* Wood.

SCROPHULARIACEAE - *Agalinis obtusifolia* Raf., *Gratiola pilosa* Michx.

VIOLACEAE - *Viola prunifolia* L.

DISCUSSION

The soils of these two bogs are similar and they in turn are similar to Middle Branch and Strange Road bogs, the sites in Natchitoches Parish described in MacRoberts & MacRoberts (1988). All four bogs are similar to east Texas bogs described by Nixon & Ward (1986).

We recorded 108 taxa for Fixit and Woodcock bogs, representing 71 genera and 41 families. Fixit had 102 taxa and Woodcock, 98 taxa. Strange Road bog and Middle Branch bog had 98 and 106 taxa, respectively.¹ The average number of taxa for the four Natchitoches Parish bogs is 101, which is almost identical to that of the six east Texas bogs studied by Nixon & Ward (1986) which averaged 103 taxa, with a range of 88 to 116. The four Louisiana bogs are also similar in floristic composition to those described for east Texas and contain 90 percent of the 48 species listed by Nixon & Ward (see discussion in MacRoberts & MacRoberts 1988).

Sorensen's index of similarity (see Nixon & Ward 1986) shows that the Natchitoches Parish bogs are similar to each other in number of taxa: Strange Road/Middle Branch (64), Strange Road/Woodcock (74), Strange Road/Fixit (77), Middle Branch/Woodcock (71), Middle Branch/Fixit (73) and Fixit/Woodcock (92). Clearly, Fixit and Woodcock are essentially identical.

¹We take this opportunity to correct mistakes in our 1988 paper. *Rhynchospora microcarpa* is *R. globularis* (Chapm.) Small, and is present at both Middle Branch and Strange Road bogs. *Lachnocaulon minus* does not occur at either site. *Lachnocaulon anceps* occurs at both Middle Branch and Strange Road, and *L. digynum* occurs at Strange Road (MacRoberts 1989). *Anthraenantia villosa* is misidentified *A. rufa* (Ell.) Schultes. *Rhododendron oblongifolium* (Small) Millais occurs at Strange Road bog. These modifications raise the total number of taxa we report at Strange Road to 98 but do not alter the number given for Middle Branch.

ACKNOWLEDGMENTS

Thanks are due the staff of the Kisatchie National Forest for their cooperation during the study, and Dr. Robert Kral and D.T. MacRoberts for their comments on the manuscript.

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